Technology Cover Letter Extension

By Cecil Hammett

There is an old Latin saying, *Terminus a quo…terminum ad quem*—"We move from where we are to where we're supposed to be." Since first grade arithmetic has earned the honor of being my hardest subject. Frequently, I took advantage of extra teacher tutoring before or after school. Although I always made good grades, I gave voice to my fear inside. Excess anxiety crept in if it were a course involving shapes (Geometry, Trigonometry). Then, something magical transpired. Calculous. Did I just say calculous? Yes. From the first day of class I understood every single lesson. I began to think, "I get it." All of a sudden I loved math. I felt genuine excitement learning about math. Today I compare calculous to an entertaining and fascinating puzzle. No longer dreading math, I am astonished to find myself having fun working the problems. Today I absolutely love math, I even chose to major in a subject that is quite heavy in arithmetic- computer science.

My academic goals have always been to learn not only the information essential to obtain a degree, but to use my new found knowledge to become a person with imagination and intellectual abilities that are both versatile and globalized. Like in the works of Plato, my educational goals are to analyze points of view, both my own and others critically, and to question everything, so one day I to will have the ability to gain my place in the history of ideas.

I entered university because for my entire life I have always known that what I want to do when I grow up was have the ability to save and change lives. Naturally, I thought the only way I could do that was through the field of medicine; however, there was always something holding me back. As a pediatric cancer survivor being in a hospital in general seems to hit just a little too close to home. Trauma scenes make my stomach turn. I did not feel comfortable in a hospital; I

knew I couldn't work there. Out of curiosity I took an intro to computer science course to receive my core requirement math credit. Trust me, this is not said often about computer science, but I loved it. Computer science fascinated me. It opened my eyes to a whole new world by showing me I could save lives, even on a biological level, without necessarily working in a hospital. I have never taken a computer science course that was similar to another. Each course has always brought new ideas, new concepts, and a new way of diving into the vast world of computer science.

My curriculum thus far has consisted in courses which have given me a significant knowledge and understanding in the field of Computer Science. Within my curriculum I learned the basic materials of discrete structures and algorithms used in computer science. I then furthered my knowledge in this topic by studying algorithms and complexity where I learned how to analyze the efficiency of software algorithms. This course gave me the ability to distinguish solutions that can process large amounts of data effectively from those that will run extremely slow if at all. In my database and information management courses I was taught the fundamentals of information storage, retrieval, and access using various formats, structures and systems in computing. I also learned how to effectively add and retrieve data through SQL queries. Front-end and web development was taught to me through a process of incremental development. I know the principles of good web design as well as the proper techniques and languages used for scripting and layout.

I obtained my knowledge of programming principles through learning C++ and C#. The first high-level programming language I ever learned to code was C++ and to the person reading this that probably just cringed at the thought, yes it was very very difficult; however, I will forever be grateful. Through learning concepts in C++ like manual memory management and

pointers I gained a better understanding of some pretty fundamental aspects of how the language works. C++ gave me a solid programming foundation which I came to appreciate when I moved to Java and C#. C# introduced me to the applications of abstraction necessary in order to combat complexity when building large systems. Once I obtained a solid foundation in programming I then transitioned to far more challenging, team-based, development projects. Through my software development course I learned the tools and techniques of software development and how it is deployed in our world today. In this course I, along with four other software students, created a fully functional electronic billboard viewer, control panel and server which can be found on my GitHub under "BlinkyBillboard." We put fourth an astounding amount of effort and in turn were rewarded with an almost perfect score. Through this project not only did I learn how to effectively work in a development team and utilize git but also I had the opportunity to explore deeply into the concepts of unit testing, user password storage and authentication, session management, user management and permissions, networking.

Along teaching me how to get behind the scenes on my computer, computer science has also taught me patience, focus, and persistence. These are qualities I will use my entire life. University has opened my eyes to a vast collection of ideas because I made the early decision to use my undergraduate education as a way obtain the tools I need to both work and communicate with the world.